

WISCONSIN EPI EXPRESS

April 29, 2004

[Wisconsin Department of Health & Family Services](#)
Division of Public Health
Bureau of Communicable Diseases

"Surveillance provides information for action." [World Health Organization](#)

The WISCONSIN EPI EXPRESS provides a regular update on communicable disease issues of importance in our state and is intended primarily for participants in the public health surveillance system. Please let us know if the topics covered are on target or if there are others that we should be addressing. Thank you. Herb Bostrom: bostrhh@dhfs.state.wi.us

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1. CHANGES IN TB MEDICATION PROGRAM

On April 1, the TB Program began phasing in a new contract with Phillips Pharmacies in Mauston, WI. This contract will provide medication to local health departments for treatment of latent TB infection. Procedures within local health departments remain the same, however, medications for new patients will arrive from the new source. Refill medications for patients starting their prescription **prior to April 1** will continue to be supplied by the UW Hospital Pharmacy. Prescriptions needed urgently (i.e. for treatment of active disease and high-risk contacts) will continue to be filled by local pharmacies selected by the health department.

Under the new contract, the pharmacy is expected to ship medication to the health department within 5 days of prescription receipt. HIPAA forms will not be required because the patient is really the client of the health department and not the pharmacy. Instead, the TB Program will provide the pharmacy with a copy of the Bureau of Communicable Diseases confidentiality policy.

For the time being, medication information for the patients will NOT be included in the medication shipment. If medication information is needed, you may print copies (in English or Hmong--Spanish coming soon) from the web at http://www.dhfs.wisconsin.gov/dph_bcd/TB/Resources/TB_resources.htm

If you have additional questions or comments about the new pharmacy, call the TB Program at (608) 266-9692.

2. MEDICAL EXAMINATIONS FOR INTERNATIONALLY ADOPTED CHILDREN

More than 20,000 children arrive in the U.S. every year as adoptees from the international community. During the 2003 Communicable Diseases Spring Seminars, the TB Program presented some information regarding medical examinations for these children. Given recent national concerns about measles cases in children arriving from China and the continued

reluctance of Wisconsin physicians to prescribe treatment for latent TB infection, it is prudent to restate the recommendations.

The varied geographic origins of internationally adopted infants and children, their unknown backgrounds before adoption, and the inadequacy of health care in many resource-poor countries make appropriate medical evaluation of internationally adopted children a complex and important task. An internationally adopted infant or child should be examined within 2 weeks of his or her arrival in the United States, but an adoptee who has an acute illness or a chronic condition needs immediate attention. (From Centers for Disease Control and Prevention <http://www.cdc.gov/travel/other/adoption.htm>).

The American Academy of Pediatrics recommends that all internationally adopted children be screened for the following:

- ◆ Hepatitis B--hepatitis B surface antigen, hepatitis B surface antibody, hepatitis B core antibody
- ◆ HIV
- ◆ Syphilis
- ◆ Tuberculosis--Mantoux TB skin test (TST), chest x-ray only if TST is positive or symptoms are present
- ◆ Ova and parasites--stool examination
- ◆ Blood lead
- ◆ Anemia--complete blood count with red blood cell indices
- ◆ Vision and hearing impairments
- ◆ Assessment of growth, development, and nutrition status
- ◆ Hematuria and proteinuria--urine analysis
- ◆ Glucose-6-phosphate dehydrogenase deficiency
- ◆ Metabolic disorders (PKU, Galactokinase, Biotinidase, thyroid)
- ◆ Dental evaluation in children >18 months of age

Other screening tests may be recommended based on the country of origin. Children from China, Russia, Eastern Europe, and Southeast Asia should also be screened for hepatitis C. African and Asian children are at increased risk for hemoglobin disorders and should receive hemoglobinopathy screening.

Special notes on tuberculosis: Reported rates of latent TB infection among international adoptees range from 0.6% to 19%. Malnutrition is common among international adoptees, resulting in an anergic state. If malnutrition is suspected, the tuberculin skin test should be repeated once the child is better nourished. Receipt of BCG vaccine is not a contraindication to tuberculin skin testing and a positive result should NOT be attributed to BCG vaccine. An induration of 10 mm or greater is considered positive in this population, unless a child is known or suspected to have been a contact to infectious TB, is undergoing immunosuppressive therapy, or has an immunosuppressive condition such as HIV. An induration of 5 mm is considered positive in children with the latter conditions. In children with a positive tuberculin skin test with no evidence of active TB disease, latent TB infection should be assumed and antituberculosis therapy should be initiated to prevent progression to disease. To treat latent TB infection, isoniazid should be given as a daily dose of 10-15 mg/kg body weight or a twice weekly dose (by directly observed therapy) of 20-30 mg/kg for 9 months.

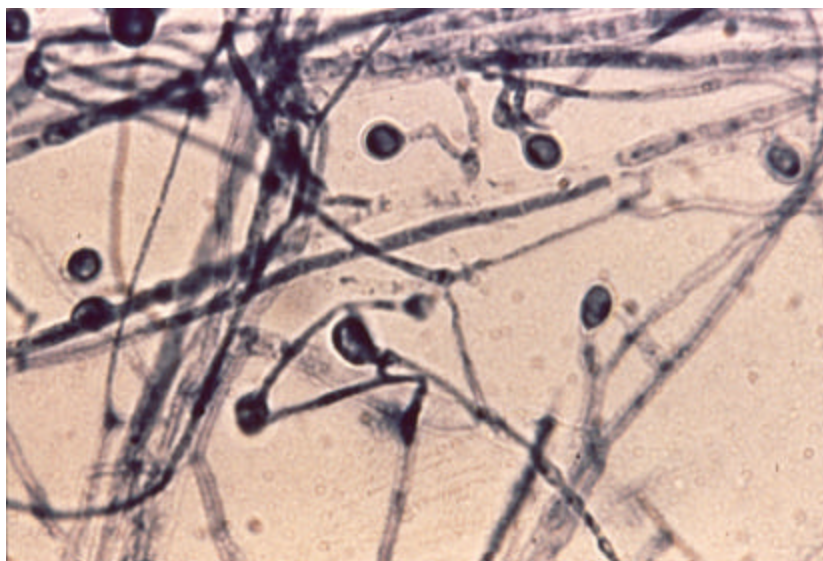
Special notes on vaccinations: Accept only written documentation as proof of immunization (vaccine type, date of administration, number of doses, intervals between doses, and age of the patient at the time of administration comparable to the current U.S. schedule). As the recent measles cases illustrate, immunization records for some internationally adopted children, particularly those from orphanages, may not reflect protection because of inaccurate or unreliable record, lack of vaccine potency, poor nutritional status, etc. If there is any question about immunization history, it is best to repeat the immunizations.

References:

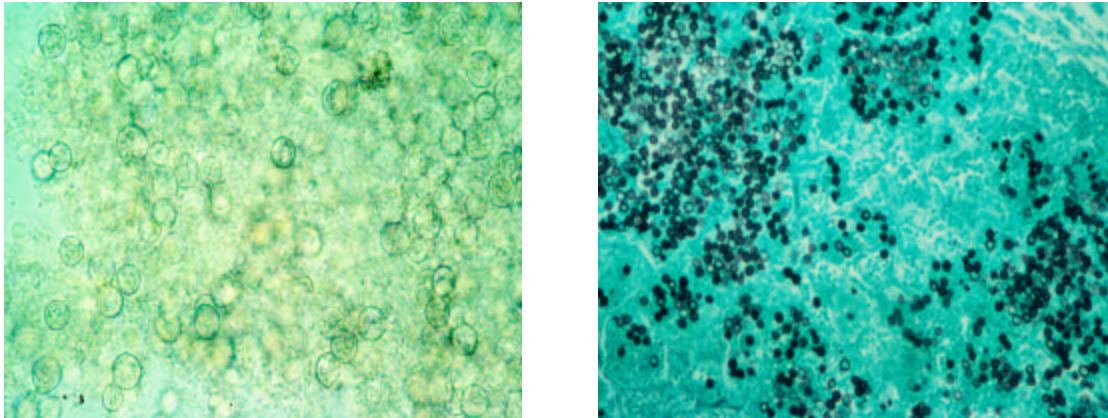
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2. American Academy of Pediatrics. Medical Evaluation of Internationally Adopted Children for Infectious Diseases. In: Pickering LK, ed. Red Book: 2003 Report of the Committee on Infectious Diseases. 26th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2003:173-180.
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3. BLASTOMYCOSIS IN WISCONSIN: A SEVERE SYSTEMIC FUNGAL INFECTION IN MAN AND ANIMALS AND AN ENVIRONMENTAL ENIGMA

Blastomycosis is fungal disease of man, dogs, and occasionally other animals (1-3). The etiologic agent that causes blastomycosis is *Blastomyces dermatitidis*, a dimorphic fungus that exists in the mold phase in nature or on culture media incubated at 22°C to 30°C. It is the mold phase in which the infectious conidia (2-10 µm) are produced (*Below*).



It may also appear in the yeast phase in sputum (*Bottom, left*) or tissue (*Bottom, right*) or when grown on specially enriched media at 37°C and is characterized by a thick-walled, broad-necked yeast cell (8-15 µm) (Below).



Background

Blastomycosis was first reported in 1894 by a Chicago dermatologist, Dr. T.C. Gilchrist, and later became known as "Gilchrist's Disease" (4). The disease has also been referred to as "North American Blastomycosis" and other names based on local occurrence of endemic infections such as "Chicago disease" and "Namekagon River Fever". It was not identified in dogs until 1916 (5). Until 1952, only 16 cases of canine blastomycosis were reported in the U.S. (6). Since that time, there has been a dramatic increase in the number of reported cases in humans and canines in the U.S., especially east of the Mississippi River.

Nationwide Outbreaks of Blastomycosis

Between 1954 and 1990, at least 12 blastomycosis outbreaks were reported in the medical literature in the continental U.S. Typically these outbreaks occurred east of the Mississippi River. Five of the reported outbreaks occurred in the north central, northwest and northeast regions of Wisconsin (Table 1). Since 1990 additional outbreaks have been reported in peer-reviewed articles and state newsletters, but their numbers are infrequent.

Table 1. Blastomycosis outbreaks in Wisconsin			
Year	County	Cases	Activities
1979	Sawyer	7	Canoeing and camping along the Namekegon River
1984	Vilas	48	Walking on a beaver dam and beaver lodge
1985	Portage	7	Fishing along the Tomorrow River
1985	Waupaca	7	Playing in an underground fort along the Crystal River
1990	Oconto	10	Miscellaneous activities involving disturbing soil

Blastomycosis in Nature

Blastomycosis is one of the diseases for which the ecologic niche remains an enigma. It appears that *B. dermatitidis* is nourished on acid soils with high organic content, abundant moisture, and possibly enrichment by animal droppings. Despite thousands of attempts, the

fungus has only been successfully isolated twice in nature from environmental samples in relation to the occurrence in human illness both times in Wisconsin (7-8). Further subsequent repeated testing at specific locations where the organism was previously isolated yielded negative results. A complete description of the environmental factors that affect *B. dermatitidis* remains a mystery. Without more precise understanding of the ecology of *Blastomyces* in nature, it is extremely difficult to prevent recurrent illness or to apply appropriate control measures. The only clues to the source of this organism lie in the limited description of the substrates from which the organism has been infrequently isolated (9).

Blastomycosis in Wisconsin

Blastomycosis has been reportable in Wisconsin since 1984 and it is the most prevalent of the systemic fungal infections in Wisconsin. During 1999 through 2003, Wisconsin averaged 102 cases of blastomycosis reported annually. Of the 510 cases reported during that time period 65% occurred in males and almost half (43%) of the cases were in people 50 years old or older.

Cases were reported throughout the year with a slight increase (55% vs. 45%) occurring between October and March. Based on investigations of blastomycosis infections in with likely sources of exposure to *Blastomyces* spores can be reliably fixed, incubations periods ranged from just under two weeks to almost 15 weeks⁹. This data may indicate that infections occurring late in the fall and winter months are typically associated with autumn exposures.

Reported cases of blastomycosis in Wisconsin, 1999-2003 (n=510)

<u>Gender</u>	<u>Race</u>	<u>Age Group</u>	<u>Region</u>
Males 329	White 293	0-12 23	Northern 209
Females 176	Black 14	13-19 27	Northeastern 122
Unknown 5	Am Indian 28	20-29 46	Western 37
	Asian 11	30-39 88	Southern 18
	Other 1	40-49 108	Southeastern 90
	Unknown 163	50+ 217	Unknown 1

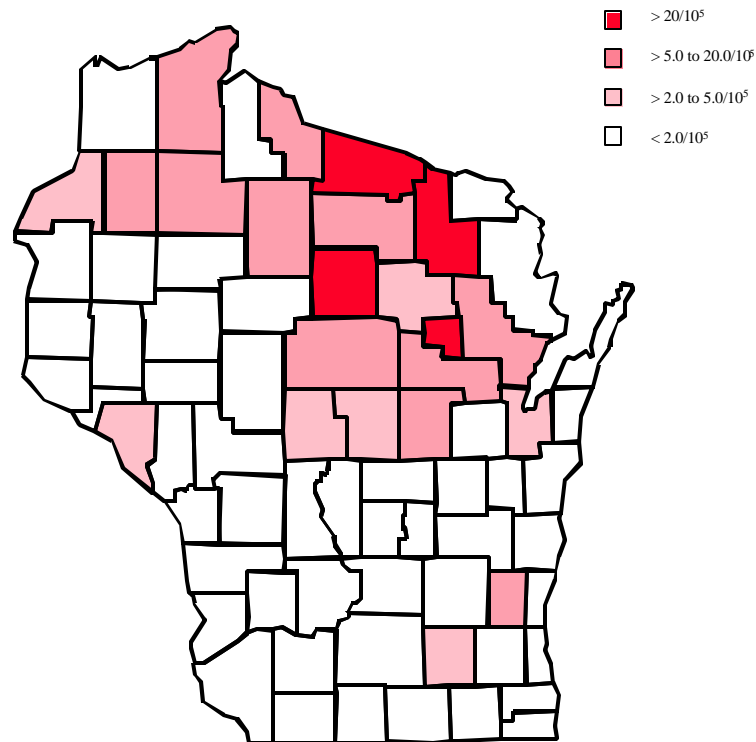
Additional Comments

Although the number of cases reported in 2003 (80 cases), was a substantial decrease compared to 1999 to 2002, there were six deaths and half of those deaths were in people under 30 years of age. This is striking as Wisconsin averaged three deaths a year typically in persons over 50 years of age.

To help answer some of the many questions regarding the ecology and epidemiology of *Blastomyces dermatitidis*, the BCD has developed a new *Blastomycosis Follow-Up Worksheet* that is used to collect data on the likely known exposures. The data will be entered into a new database.

Top 15 Counties of Blastomycosis Infections in Wisconsin, 1999-2003
Incidence Rate per 100,000 Population

1. Menominee	(51.5/100,000)	9. Oconto	(13.3/100,000)
2. Vilas	(43.2/100,000)	10. Bayfield	(12.1/100,000)
3. Lincoln	(27.6/100,000)	11. Shawano	(12.1/100,000)
4. Forest	(24.5/100,000)	12. Price	(7.7/100,000)
5. Sawyer	(16.0/100,000)	13. Washington	(7.3/100,000)
6. Iron	(15.6/100,000)	14. Marathon	(6.5/100,000)
7. Oneida	(15.5/100,000)	15. Waupaca	(6.5/100,000)
8. Washburn	(13.8/100,000)		



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4. NORTHWEST CENTER FOR PUBLIC HEALTH PRACTICE ANNOUNCES 2004 SUMMER PUBLIC HEALTH INSTITUTE

The NCPHP, which is located on the University of Washington campus, has announced the curriculum for its annual Summer Health Institute for Public Health Practice. The Institute will be held in Seattle on August 2-6 of this year. The Theme for this year's Institute is **Public Health Emergency Preparedness: Tools for the Frontline**. The curriculum will offer six separate track offerings:

1. Introduction to Epidemiologic Methods
2. Intermediate Epidemiologic Methods
3. Topics in Public Health Management
4. Topics in Emergency Preparedness and Response for Public Health Leaders
5. A Systems Approach to Public Health Emergency Preparedness
6. Geographic Information Systems

Further information and registration materials can be found on the Institute's website at <http://healthlinks.washington.edu/nwcpnp/nipnp/>

5. 2003 WISCONSIN ACT 186 RELATING TO PUBLIC HEALTH EMERGENCIES IS ENACTED

Senate Bill 120, as amended and passed by both houses of the State Legislature, was signed into enactment on April 7 as Wisconsin Act 186. The new law essentially does five things:

- Creates a 23 member State Public Health Council to be housed in the Department of Health & Family Services;
- Establishes provisions for the state to reimburse local health departments for costs they incur for quarantining individuals in a public health emergency;
- Establishes an expanded statewide system for municipalities to provide each other with mutual aid (particularly the aid of local public health and fire departments) in the event of a public emergency;
- Requires the use of an Incident Command System (ICS) in managing emergencies and training specified personnel, and further defines and describes an Incident Command System;
- Expands state exemption from liability for persons assisting in an emergency.

Act 186 may be viewed and downloaded from the Legislature's web site at

<http://www.legis.state.wi.us/2003/data/acts/03Act186.pdf>

Telephone Reporting of Unusual Disease Occurrences

Occurrences of diseases that are uncommon or atypical in Wisconsin, and outbreaks or clusters of disease which are identified, should be reported by phone as soon as possible, to (608) 258-0099. Reports may be made to this number on a 24/7 basis, but please do not use it for normal and routine disease reporting

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